## ABSTRACT OF THE DISCLOSURE

The permanent magnet type reluctance electric motor includes a stator including a stator iron core and having armature coils placed inside slots, and a rotor provided with a plurality of magnetic barriers formed by cavities and placed on an inner side of the stator such that sections where a magnetic flux can easily pass (d-axis) and sections where a magnetic flux cannot easily pass (q-axis) are alternately formed, and made of a rotor iron core having permanent magnets in cavities. The rotor satisfies a relationship of $PL / 2\pi RW_{qave} \geqq 130$, where $W_{qave}$ [m] indicates an average thickness of the rotor iron core on an outer side in a radial direction of the rotor with respect to cavities arranged in a q-axis direction, L [m]; a width in a circumferential direction of the cavities, P; the number of poles and R [m]; the radius of the rotor.